

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Application of:**

Himansu M. Gajiwala

**Serial No.:** 10/608,830

**Filed:** June 26, 2003

**For:** LOW-COST, LOW-DENSITY,  
ABLATIVE RUBBER INSULATION FOR  
ROCKET MOTORS

**Confirmation No.:** 7592

**Examiner:** V. Ronesi

**Group Art Unit:** 1796

**Attorney Docket No.:** 2507-5300.1US  
(21870-US-04)

VIA ELECTRONIC FILING  
October 21, 2008

**COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE**

Mail Stop Issue Fee  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

This communication is filed in response to the Notice of Allowance mailed July 24, 2008, and sets forth Applicant's comments, pursuant to 37 C.F.R. § 1.104(e), on the Examiner's Statement of Reasons for Allowance accompanying the Notice of Allowance.

In the Notice of Allowance, the Examiner indicates:

The present claims are allowable over the closest prior art Herring (US 4,878,431), Whelan (US 4,246,359), and Trask et al. (US 4,726,987) for the following reasons:

The present claims are drawn to a rocket comprising an insulation material disposed between an [inner] surface of a case of a rocket motor and a propellant, the insulation material comprising a low-density ethylene propylene diene monomer polymer, at least one flame retardant, sulfur, polyvinyl chloride fibers having a density of [1.38] g/cc, and at least one additive selected from antioxidant, cure accelerator, cure activator, tackifier, and plasticizer. A method of making said rocket motor is also claimed.

Herring discloses elastomeric insulating materials for rocket motors which are disposed between an inner surface of a rocket motor and the propellant comprising crosslinkable elastomeric polymers such as EPDM; polyaramide pulp; organic and inorganic flame retardants; and other additive such as plasticizers, tackifiers, and curatives such as accelerators and activators. Herring teaches the use of flame retardant additives such as chlorinated organic compounds with antimony oxide or hydrated alumina, however, it does not teach or suggest the use of a polymeric organic compound such as polyvinyl chloride or fibers other than polyaramide pulp.

Whelan discloses a flame retardant for hydrocarbon diene rubbers comprising a synergistic combination of a halogen containing organic compound such as polyvinyl chloride, alumina trihydrate, and an iron oxide. Whelan teaches that the halogen-containing organic compound may be non-polymeric or polymeric, including chlorine-containing polymers, e.g., polyvinyl chloride. Whelan fails to disclose or suggest the use of polyvinyl chloride fibers.

Trask et al. teaches that polyvinylchloride is advantageous in fire-retardant applications due to its two-stage degradative process (col. 3, lines 18-28), however, it fails to disclose or suggest the use of polyvinyl chloride as a replacement for the char-forming polyaramide pulp like taught by Herring. Trask et al. fails to even teach polyvinyl chloride fibers or a rocket motor insulation material.

Thus, it is clear that the references, taken individually or in combination, do not disclose or suggest the claimed invention.

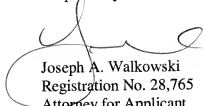
In light of the above, it is clear that rejections of record are untenable and thus the present claims are passed to issue.

Applicant concurs with the reasons as stated by the Examiner insofar as they comprise a summary, which is exemplary and not limiting. However, the scope of the claims is based on the actual language of the claims and equivalents thereof, and not on a paraphrase or summary of the claim language.

The independent claims as allowed recite features and methodology in addition to, and in different language than, those described in the Statement of Reasons for Allowance. Furthermore, the dependent claims recite elements in addition to those of the independent claims, which are also not reflected in the Statement of Reasons for Allowance. Accordingly, the scope of the claims must be determined from the literal language of each as a whole, as well as all equivalents thereof.

Therefore, to the extent that the Examiner's reasons for allowance as stated are not relevant to, or wholly encompassing of, a particular claim, independent or dependent, Applicant assumes that (pursuant to 37 C.F.R. § 1.104(e)) the Examiner has determined that the record of the prosecution as a whole of the application makes clear the reasons for allowing those claims. Further, it appears, pursuant to M.P.E.P. § 1302.14, that the Examiner's Statements of Reasons for Allowance are not intended to encompass all of the reasons for allowance.

Respectfully submitted,



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Date: October 21, 2008  
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